

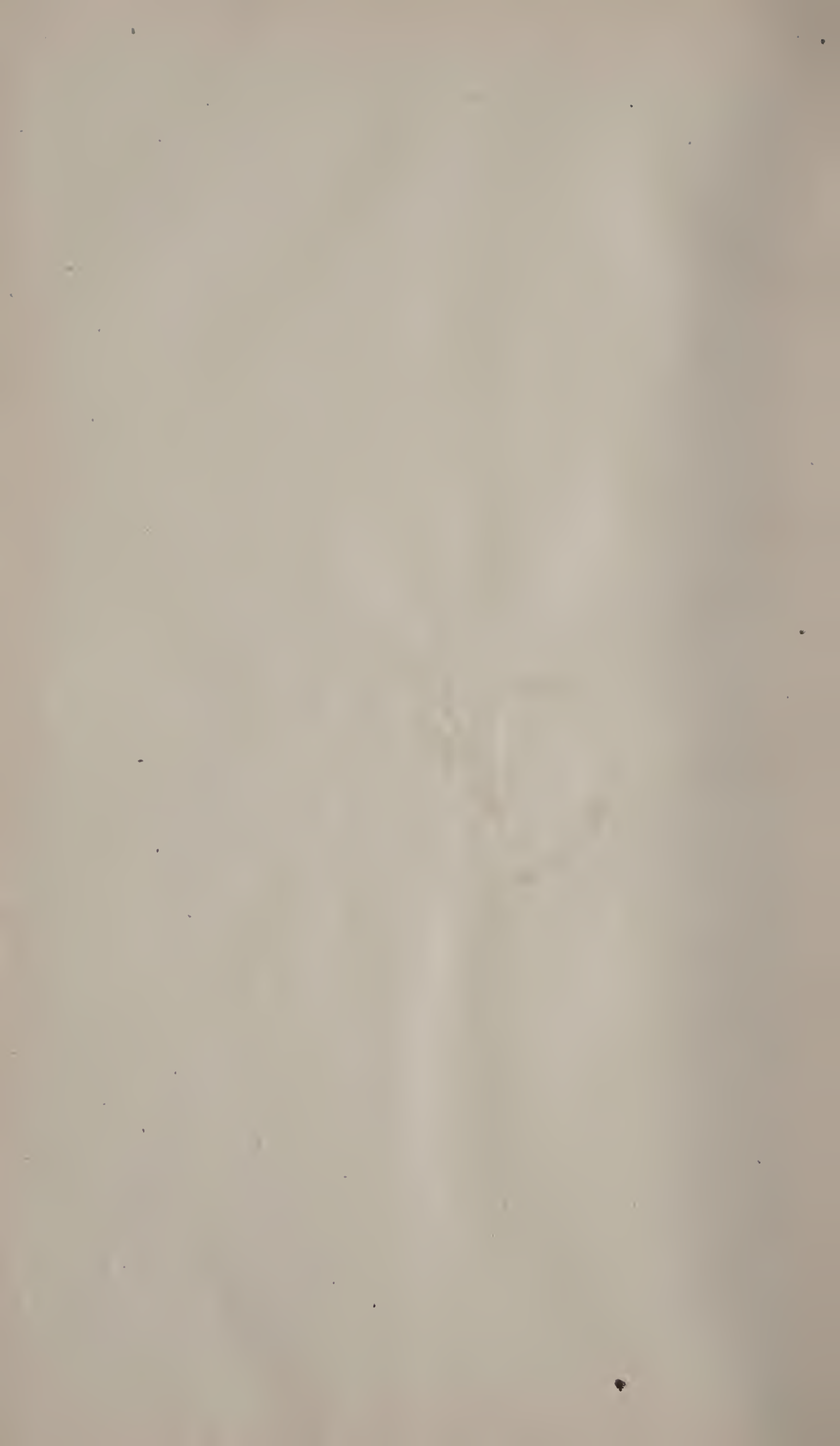
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UNITED STATES OF AMERICA.



MECHANICAL SCIENCE

AND

The Prize System,

IN

RELATION TO AGRICULTURE.

9366 BY WILLIAM DAY,

AUTHOR OF "HOW TO STOP, AND WHEN TO STOP. PUNCTUATION REDUCED TO
A SYSTEM,"

AND "SLAVERY IN AMERICA SHOWN TO BE PECULIARLY ABOMINABLE."

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P R E F A C E.

As the writer of the following pages is not a manufacturer of agricultural machinery, nor has any pecuniary interest in the "Prize System," relative to "Mechanical Science, as applied to Agriculture," it may be matter of surprise to some, that he should have animadverted on a system, adopted and acted upon by all the agricultural societies of the kingdom, composed, as those societies are, of so many practical judges of every thing connected with the land.

Beyond the fact of the author entertaining an ardent desire for the advancement of his country's agriculture, and anxiety to advocate whatever is likely to lead to that important end, he has no

apology to offer for taking up the present subject in a spirit of independent inquiry, and with the sole desire of doing justice to all persons interested in it.

The “Prize System,” in its practical operation, is the source of so much perplexity to both the maker and buyer of agricultural implements, that a remedy for the evil is imperatively called for. The hope of either supplying this remedy, or of inducing the congregated wisdom of our agricultural societies to supply it, is motive enough, the author thinks, for bringing the evils of the existing system to light, by means of the public press.

To give the decisive impulse, and to give it with energy,—to ensure, not the victory of a party, but the reform of a growing evil,—must be the work of those who are more immediately affected by its operations. The “fitness calls them on.” Let them take a firm and forward step, now that they have reasonable hope that the footing is sure, and that they are in the right road. A thorough reform can be brought about in no other way. A partial improvement has already been effected

by the power which is here invoked ; and that is a most instructive fact. It ought to give a stimulus to further efforts in the same direction. No doubt, if the Royal Agricultural Society, in connexion with the implement-manufacturers, were to bring that large amount of power and experience, which it possesses, to bear on this subject, success would not only be certain, but speedy.

43, PARLIAMENT STREET, LONDON.

MAY 25TH, 1857.

MECHANICAL SCIENCE

AND

The Prize System,

IN

RELATION TO AGRICULTURE.

CHAPTER I.

BRIEF REVIEW OF THE PROGRESS OF MECHANICAL SCIENCE, AS APPLIED TO AGRICULTURE.

UNTIL within little more than a quarter of a century from the present time, Agriculture, in this country, was among the most backward of the industrial arts. When the great material resources of England, the extent of its commerce, and the genius and enterprising spirit of its people, are duly considered, this fact cannot fail to strike the observer as an anomaly difficult to explain. The usual way of accounting for it is, that this most ancient of all the arts has ever been practised by men the most ancient in their notions, and the most lukewarm in the path of discovery. This is what others assert, and not what I would be supposed to sanction. An ardent friend of Agriculture, I am opposed to all prejudice being excited against the farmers, and desire to set this part of my subject in its clearest and fairest point of view.

During the heats of party contention, many severe things have been alleged against “the farmers, as a body.” This is one of those innocent phrases that may mean anything or nothing. Each member of “the body” may conceive

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that it has no allusion to him, and so pass it on to his neighbour, till, finding no owner, it vanishes into "thin air," and leaves "the body" as it found it! No doubt, some of the assertions against farmers have been true of individuals,—

"Perch'd on the meagre produce of the land,
An ell or two of prospect they command;
But never peep beyond the thorny bound
Or oaken fence that hems the homestead round."

Or such observations might, probably, have applied to particular districts, but could not, with justice, be extended to the entire agricultural body, or to the cultivators of the broad acres of England, as a whole. And it is doubtful whether a disinclination to improvement now lingers anywhere, save in some dark corner of the land, into which the light of science has not yet been able to penetrate.

It would lead me too far away from the main object of this publication to criticise all that has been, in past times, charged against "the farmers, as a body," or to establish the fact of the rapid and almost universal advance of practical agriculture, and of the march of mind among its practical men; and I, therefore, propose to glance at the rise and progress of what may be termed, by way of distinction, the *mechanical* methods of improving the art of culture.

*

There must always have existed an incentive to increase the facilities of good farming, and render fertile "the land we live on." Thoughts of extensive bearing and of the highest import, however, cannot embody themselves in fact all at once. Prejudices and mistaken notions may have to be removed, by a longer or a shorter process; but this process can never be hastened by either ridicule or slander. Consequently, no good can come of charging the farmers with resistance to agricultural improve-

ment, when it is so manifestly to their own interest to embrace it. Those who have sufficient acquaintance with the inhabitants of rural districts must be aware, that old-established opinions and practices are not to be removed from them quite so speedily as from those who live “where merchants most do congregate.” Fontenelle asserts, that “mankind only settle into the right course, after passing through and exhausting all the varieties of error.” Whatever exaggeration there may be in this, it may be safely stated, that it would not be possible for farmers, any more than for other men, suddenly to shake off old habits and associations, without calling forth agencies which would act adversely to freedom and to right. A change from wrong to right is not so easy to make as to desire, and to write or talk about. No class can be expected, in one of its most important concerns, to pass at once from listless indifference to restless activity. A long and often difficult apprenticeship has to be served, before its business can be learned. The law of progression must be observed in matters of this kind, as well as in the operations of nature. No deviation is permitted from the ordinary laws of Providence. An infant cannot step at once into manhood, nor can corn be expected to spring up and ripen in a day. Solon carried out the moral and political wisdom of framing his laws in accordance with the times and circumstances of the people for whom they were designed. He was once interrogated as to his laws being the best he could devise, and his answer was, “I have given my countrymen the best laws they are capable of receiving.” Like all great truths, this truth is simple enough; and, had it always received the consideration which is due to it, the world would have been saved a vast amount of turmoil and trouble. To impose upon men more than they are capable of receiving must ever be productive of the very reverse of what was intended. Social and political reformation, to be successful, must proceed by degrees, so as to have time for consolidation, and opportu-

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nity of winning converts, by an exhibition of its advantages, and not by being thrust upon men, before they are ripe for its appreciation and enjoyment. If the agriculturists, like all other classes, have laboured under some peculiar disadvantages, there is no ground for supposing that, in natural intelligence, they are at all inferior to any other body of their countrymen :

“Man is man in every station,
The difference only—education.”

It is the law of man's cultivated nature to prefer knowledge to ignorance, precisely as it is a corresponding law to prefer light to darkness.

From their peculiarly secluded life, the generality of farmers may be said to inhabit the bye-paths and outfields of society ; and they formerly had but few opportunities of general association. Some half-dozen of them occasionally met at the village inn or the town hotel, where, over the soothing influence of “a pipe and a glass,” they chatted of the movements on the farm, and their several experiences of this or that method of culture. They were not silent on their points of difference ; but much useful information was given and received, by mutual interchange of opinions, in the way of friendly discussion. The timid were encouraged by the enterprising, to substitute the then new mechanical for the old manual mode of cultivation ; while the village blacksmiths and wheelwrights were, to prevent a falling off in their own trade, and to satisfy the new wants of their customers, necessitated to try their “prentice hands” at improving the implements they were accustomed to make and repair, and to aim at copying some of the modern inventions of the larger manufacturers. Whilst these causes were at work, for the improvement of the farmers, the chief manufacturers of agricultural implements were not idle. Men, possessing

mechanical genius and manufacturing facilities, had made it their business to bring those advantages to bear upon the production of more scientifically-constructed implements, for the use of the farm; and, in 1835, the principal kinds now in use had, in a form more or less perfect, been manufactured, locally, to a considerable extent, though the general adoption of them was, comparatively, very limited.

The little gatherings of the farmers, to which allusion has just been made, had an excellent effect, in another point of view. The darkness of isolation that formerly surrounded them was thus rent asunder, by the sunshine of sociality and good feeling. This self-reformation went hand-in-hand with their interests, as well as with their feelings; and, under the influence which was exercised over them for their good, by those of more "mark and likelihood" of their own class, and the more liberal and enlightened of their landlords, organizations were effected for more systematic action, on the plan of our present Farmers' Clubs.

To say that these clubs, which commenced upon a small scale, and extended as circumstances permitted, have more than answered the most sanguine expectations of their founders, is only saying what almost every one knows. Their effects are admitted to be as beneficial as they will, no doubt, be lasting.

All reference to the past is only of moment and value as it affords an argument for the future. In this case, the task is at once interesting and useful: useful, inasmuch as it conveys to us both instruction and encouragement, by proving how, from very small beginnings, by dint of energy and perseverance, on the part of those engaged in a good cause, most beneficial effects may be accomplished; and interesting, as showing, by comparing the present

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clubs with similar ones, at their commencement, the evidence of the expansibility of the agricultural mind, and the progressive character of agricultural improvement.

We have another evidence of this in what the wonder-working power of the Press has effected in the same direction. Accustomed to hardy exercise, the inclinations of the farmers cannot be said to be studious. How few of them, generally speaking, could formerly be said to be literary. How few of them had either time or inclination to read a mere scientific treatise on any branch of their pursuits, and make themselves masters of its contents. But the publication of newspapers and magazines, especially devoted to agricultural topics, has wrought a change in this respect. The small seeds of knowledge of the events and facts immediately affecting themselves, and influencing their welfare, having been sown among them, sprung up in due time, and ripened into fruit; proving, in this instance alone, that much that was deemed inert in the farmer was referable to his isolated position,—to the peculiar elements and circumstances out of which his character had been formed,—and that his asserted “backwardness” had no necessary permanence, but could be modified by the gradual progress of enlightenment around and about him. The newspaper press is a mighty engine, and has done wonders in extending a desire for agricultural improvement amongst all those more immediately interested in the culture of the soil. Opinion, indeed, everywhere regulates practice, and has an important effect on the progress of scientific knowledge. In this respect, the publishers of those periodical publications, devoted to the interests of the farmer, have been to agriculture what the early adventurous merchants were to commerce. They circulated the products of thought and practical information in the best and most effectual manner, and so opened the minds of the people with whom they had dealings, to the conviction, that there was something worth embracing

in the new sources of trade offered for their acceptance. The farmers, in fact,

“If not the first by whom the new were tried,
Were not the last to lay the old aside.”

Before the introduction of such newspapers and other agricultural publications, hardly any portion of the rural population knew what any other portion, as a class, was about, — what their soils, their crops, their returns, their practices, or what their local reasons for the adoption of methods different from their own. These publications remedied all this. They could be read with little cost of money or of time. What is the circulation of a volume to that of a paragraph which runs the round of the Press! The agricultural newspaper tempted the farmers to dip into its varied contents, and so lured them, as it were, into the path of study and reflection. It brought, week after week, some new fact or some new idea to their notice connected with their own immediate pursuits, and thus added, by little and little, to their mental stores, until facts and ideas had accumulated to an extent for which the cause would have appeared, at first, totally inadequate. A volume containing the same amount of information would never have been opened. The influence of all the books ever written on agriculture, in point of fact, is but as a feather in the scale, compared with that of the agricultural newspaper, as a means of carrying knowledge into the nooks and corners of the agricultural districts. Its advertising columns, too, drew their attention to the ingenuity of the mechanic, who constructed various implements to subdue refractory nature, and make the stubborn earth bend herself to fulfil the wishes of ingenious man. Instruments of various forms for facilitating the tillage of the land, and various new devices, by which human labour could be dispensed with, in the production of desirable commodities, were delineated and explained. There were

“pressers,” for open soils, “clod-crushers,” for stiff clays, and “grubbers” or “extirpators,” to tear out the weeds that stifled the good seed, and machines for otherwise cleaning the land, and encouraging the growing crops.

There were also, in progress of events, drilling and sowing machines, in every required variety, for depositing seeds in rows, or patches, or broadcast, as well as manures, either liquid, moist, or dry; together with portable and fixed steam-engines. Then came thrashing machines, which performed all the operations, simultaneously, of thrashing, shaking, riddling, winnowing, weighing, and putting nicely-prepared samples into sacks for market,—an immense improvement on those which formerly thrashed out the corn only!

These facts are significant of the numerous means now brought to bear on farming affairs, and the vast importance which the farmers now attach to providing themselves with a stock of good and useful implements. The most important of the old relations of agriculture have been changed, and that by a process which, although comparatively rapid, has been sufficiently gradual to bring the event upon the farmers, so as to allow for their making due provision for the change. If anything is indicative of agricultural progress, it is the extensive manufacture of these agricultural appliances,—so extensive, indeed, as to form a distinct and important branch of national industry. There are now some hundreds of establishments, scattered over the country, carried on with an enormous capital, and whose many thousands of occupants are daily employed in meeting the large requirements of those whose interest it is to go on increasing the productiveness of the soil.

Every thing, indeed, connected with farming is so advanced, within the past few years, that the soul of improvement may be said to have entered the agricultural

body. Action has solved doubts, by destroying them. A taste is now abroad amongst farmers generally to excel in their pursuits. They are fully alive to the facts, that capital sunk in the earth is sure to rise again, with a large interest, and that perseverance is the well-spring from which flows success. All this has acted and re-acted in a manner the most beneficial to themselves, as well as to the community at large; and it may be doubted, whether the inventive power of man could have rendered a greater service than in producing incitements to the mental and physical activity of the tillers of the soil. Whatever encourages that activity, whatever accustoms men to acquire a higher standard of excellence in their business or profession, affords, in itself, the means of satisfying the new wants which it engenders.

In this brief retrospect of the principal events which have, more directly, led to this gratifying change, I must not fail to notice that most remarkable event of this, or, indeed, of any other, age,—the rapid transport of goods and passengers by steam on railways. This was not the every-day work of every-day minds. It was no commonplace event. It gave a new impetus to old habits, and brought home to the farmers, amongst others, a practical consciousness of living in an age of wonderful events. The new mode of locomotion destroyed the force of the instinctive objection to new courses, except in those whose interests were affected in an adverse manner. But even these it soon reconciled to their lot, when they found themselves gainers, to a greater extent, than losers, by the mighty change. Individual losses speedily disappeared beneath the swelling tide of the general good. The extensive system of internal communication which railways established has cost no less a sum than three hundred millions of money, and the effects of this enormous outlay are seen, more or less, in every part of England. The momentous consequences of this mighty system to the

manufacturing and trading interests of the country, overflowing, as it does, with capital, and distinguished, as it is, for the energy and enterprise of its commercial men, are so apparent, that "he who runs may read;" but, looking at railways as more directly affecting the habits, wants, and wishes of agriculturists, there is enough to warrant the statement, that they have conferred on the farmers an amount of benefit of which they cannot be too sensible. The colossal magnitude of such a mode of transit, which, with the electric telegraph, almost annihilates time and space, by bringing the opposite extremities of the land, as it were, into contact with each other, enables a farmer, a hundred miles from Mark-lane, to communicate with it more easily than he used to do with his own county town, and gives him the means of transporting his produce to, and supplying his wants from, distant places, with as much ease, promptitude, and cheapness, as weighty goods could be formerly carted to the nearest market or seaport. It would be difficult to fix the limit or measure the benefits of such facilities of transport. When heavy materials can be conveyed from great distances, at little cost, there is done for those necessary aids to culture, for which no light substitute can be obtained, what the discovery of light manures did for the special manuring of the soil. And the introduction of these manures, by increasing the cultivation of root-crops, extended the sale of the drill and the horse-hoe, and created a demand for a class of implements essentially necessary to assist the manures in developing their fertilizing properties. The farmer who used purchased manures could not afford to grow weeds, or risk the loss of a favorable sowing season, by depending on mere manual labour. The materials of drainage, the exchange of soils, and the new implements of husbandry, for instance, to say nothing of coals for the domestic use of the farmer, cannot be lightened, nor can less bulky substances be found for them; but quicken and cheapen their transport, and the same thing, in effect, is done. Without railways,

it is quite certain, that the annual exhibition of agricultural implements, at the Royal Agricultural Society's meetings, would have been confined to a merely local character, and much of their present interest, influence, and profitable pecuniary results, would have been, consequently, lost.

All this is of great moment to the farmer; but the money benefit of railways to him is far from being the only one. Wherever the railway whistle is heard, there is progress: it awakens the most sluggish to the fact, that reform is on the march, and they who stand in its way are in danger of being crushed under its ponderous and rapid wheels. The whole result of railways is, in short, not acquiescence in old habits, but that stir and ferment which are essential to improvement. The natural effects which they have produced upon the social relations of different centres of population in rural districts, by augmenting the personal communication between them, are not the least memorable of their consequences. Farmers are no longer wholly engrossed with the practical, everyday business of the farm. The railway system renders social intercourse between them so simple and easy, that they are now as ready as any other class to take advantage of it, thus adding another link to the chain of kindly feelings which should bind man to man. However true it may be, that individual mental capacity is capable of enlargement by any process of culture, it is equally so, that the extent to which that capacity may develop itself is determined by the proximity to it of minds which arouse its energies by the sympathy of kindred tastes. In this respect, the intercourse to which I allude has been one of the most efficient means of bringing about that improved state of things which is now visible in almost every homestead. It has introduced discussions on topics necessarily interesting to farmers, and excited that energy so natural to new inquirers; thus exemplify-

ing the fact, that intelligence and enterprise are not less the strong characteristics of English farmers than of any other class of their countrymen. There is no need of argument to prove this, as every day's experience brings it home to the conviction,—especially to the conviction of those whose dealings with the farmers render them the most competent judges.

The same year that introduced railways, saw the establishment of the Royal Agricultural Society of England. Supported by a large proportion of the nobility and gentry, as well as of the genius and wealth of the country, the influence of this Society has been, and no doubt is, immense in advancing whatever it considered an improvement in the management of the farm, whether in the rearing of stock, the application of manures to the land, or in the invention and improvement of the implements of husbandry. No one acquainted with its proceedings will deny, that it has effected much good in all these matters. Its organization, as a national institution, would naturally give it great weight amongst farmers. The congregated form of action is the life, indeed, of all active operations, and when exerted on a large scale, as in this instance, it could not fail to show its vast superiority over the attempts of any scattered and disjointed forces.

This remark is not intended to disparage the influence of local societies of a similar nature, which have sprung up in almost every populous district, as all such institutions are highly beneficial, when directed to their proper object. The discussions elicited by agricultural gatherings of this kind always excite a salutary degree of emulation, which cannot operate otherwise than beneficially. But what is desired to be conveyed, by alluding to the superiority of numbers in one united phalanx, is, that, if all the local societies were to acknowledge the Royal Agricultural Society as their head,—the pivot around which all

inventions and improvements in agriculture should revolve, —and so work together in harmony, a great pressure might be brought to bear on a given point, which would dispel and overcome the peculiar crotchets of those

“ Who talk of principles, but notions prize,
And all to one loved folly sacrifice.”

A rightly formed and properly conducted union of the kind would be beneficial both to the farmers and the implement makers. And where, then, would be the objection to it?

If the societies in question were to yield a willing acquiescence to the direction of one guiding head, they would be doing only what an army does in battle. They would derive a large amount of advantage for themselves, through the very ascendancy which they sanctioned. They would but yield a privilege which would be subservient to their own interests, just as the disciplined obedience of the soldier pays homage to the more experienced skill of his general, and relies upon him for protection in the hour of danger. The Royal Agricultural Society has, generally speaking, proved itself highly useful in the development and propagation of great agricultural truths and discoveries; and if it could add to its power by the union here suggested, it would exert a mighty energy in the agricultural world, which it would fill with its seen and hidden influence. In moments of general enthusiasm, it is enough that a society carries the favourite banner; but, in the intervals between those moments, its importance depends upon the confidence inspired by the judiciousness and wisdom of its proceedings.

Amongst their other functions, most of the agricultural societies of the kingdom follow out the scheme which it

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is my immediate object to examine. Keeping the Prize System in view, then, as immediately connected with the invention and improvement of agricultural implements, the reader's attention will now be directed to the two great and positive rivalries connected with it, its advantages and disadvantages, as entwining with them most of the threads which it is necessary to unravel.

CHAPTER II.

THE PRIZE SYSTEM ADVANTAGEOUS IN THE INFANCY OF
ANY ART OR SCIENCE.

THAT the system of offering prizes by the agricultural societies was, originally, adopted with the very best of motives, there cannot be a doubt. So long as any Art or Science is in its infancy, it especially requires this kind of fostering. Whoever desires to mount the hill of fame, must, doubtless, prepare himself for the task, under any circumstances; but inducements to proceed along, what is often a rugged path, must be more or less useful, so long as there is an absolute necessity for stimulating inventors into vigorous action.

Prizes may be said to be useful, so long as they enable science to test an assumed improvement by something more than the arguments adduced, in a controversial spirit, for or against it. A system which pushes a science forward to a given point may, however, become impolitic after that point has been gained. The absurdity of continuing the same discipline with an adult as with a child, is manifest, but it is equally absurd to treat an established science on the principles applicable to one just struggling into existence. For instance: Before astronomical science and the art of navigation attained their present accuracy, and a voyage across the ocean was attended with uncertainty, if not with danger, the discovery of the best means of finding the longitude was a very great desideratum; and the government of Queen Anne acted with a liberality

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worthy of a great naval power, in offering a reward for the best method of determining the longitude of a given place, with the greatest accuracy. The reward acted as a powerful incentive, and the result was to make the ocean-pathway as clearly defined as a turnpike road; and our ships now sail out, and return home, with as much exactitude as if there were finger-posts erected at every geographical degree along the surface of the ocean!

There was wisdom in thus offering a reward to secure such a desirable object, in the comparative infancy of scientific sailing; but a government would act just as *unwisely*, if it kept up a state of feverish anxiety to discover some other and *newer*, and, perhaps, less simple, method of ascertaining the longitude at sea.

Again: Large rewards were offered for the discovery of the north-west passage across the continent of North America. Expeditions, from time to time, were fitted out, urged on by the hope of the reward,—the golden lure. Time, property, and even life, were sacrificed to the discovery, which was, at last, made; and then, after all, the passage was found to be unavailable as a means of communicating with the Pacific Ocean. The government will offer no further reward, inasmuch as the object is not worth attaining; and it has recently felt called upon to put its veto on any further attempt to risk property and life in the inhospitable region, through which it was hoped our merchandise and commerce might be successfully transported.

In a similar manner, recurring to the invention and improvement of agricultural implements, when one has been tried, and found to be really useful, prudence would plead for its immediate adoption, as it would for the instant rejection of another which, on trial, should be found not to answer the purpose for which it was designed. By offering prizes to the successful competitors in this branch of mechanical science, it was thought that a useful spirit of emulation would be excited amongst them,

and superior excellence be the result. Unquestionably, such inducements have called forth a vast amount of improvement in the old methods of ploughing, cleaning, draining, and sowing the land, and, to a great extent, have fostered and developed many an infantile invention into robust manhood. It may be said, as it has been said, that science ought to be cultivated for its own sake,—that the pleasure of its acquisition is its own sufficient reward. Doubtless, as a mean to an end, science has nobler objects in view than the bare accumulation of money. It is the main instrument of civilization, the conqueror of geographical distinctions, the subduer of national prejudices, and the benefactor of the whole human family. The simple fact is, that the love of fame is as natural to the human heart as is the love of gain. The desire of distinguishing ourselves, and the desire of benefiting ourselves, jointly excite that spirit of emulation which has been so productive of good in the world. Who, for example, follows trade or commerce, or professional employment, but as means to an end? The surgeon does not practise for the mere sake of practising; the tradesman does not stand behind his counter with the sole motive of accommodating his customers; nor, to come to the point, does the manufacturer of agricultural implements work for the mere pleasure of contemplating his warehouse crammed with the labours of his workmen. Without wishing to deny that there are considerations of a less sordid nature than mere pecuniary gain, which prompt to competition, and that a legitimate regard to professional honour is a powerful motive, one thing is quite clear, that *reward* is the beacon that mainly directs the steps of all. Those peculiar beings, termed “singular geniuses,” may be, from their very singularity, inclined to treat, what calls forth the ardent zeal of others, as mere matters of course,—as their own common road of action: they feel so strongly, and see so clearly, all that is necessary to attain the result they have in view, that

they do not need any stimulus to exertion, and may really have difficulty in understanding why people make such a fuss about what, to them, seems such a trifle :

“ They, like to scatter’d seed, at random sown,
Wish to spring up by vigour of their own.”

Doing their best, simply to please themselves, they may not, without difficulty, endure to be called up and placed in the midst of their fellow-men, to be petted and praised. Others, again, termed “ truly great souls,” because of the vastness of their mental powers and their natural diffidence, often absolutely require commentators and critics, to set before the public the valuable nature of their inventions or improvements. Many a time and oft, in days gone by, when these commentators and critics have not been at hand, the eulogy and the reward due to the highest order of merit have been wanted, and its possessors suffered—

“ To drop into the grave, unhonour’d and unknown.”

The design of encouraging improvements in agricultural implements, by the periodical offer of prizes, was both benevolent and beneficial. It not only brought manufacturers into competition with each other, but induced the farmers to attend the annual shows from every part of the kingdom. These were some of the means of introducing a better and more numerous selection of such instruments amongst the farmers generally. It was not enough to stimulate mechanical genius to produce ; but, more important still, it was necessary to educate agriculturists to appreciate and to use such productions. And it is worthy of remark here, that, at the advent of the Prize System, very few of the cultivators of the soil knew the full value of the mechanical arts, when applied to the land, and still fewer had even a dim foresight of what has since taken place regarding their vast importance. Many,

indeed, made no secret of their unbelief as to mechanical science being able to conquer the stubbornness of nature, and could hardly be brought to leave their homes to witness effects, which have, since, been so largely developed, and so universally acknowledged. The great change that has been produced in this respect, the electrical shock which the agricultural mind has received by the comparatively recent triumphs of the science in question, are due, in some measure, to the distribution of prizes, and the various other encouragements held out for the improvement of the farm.

The annual exhibitions of the Royal and other Agricultural Societies have always been instructive sights. They presented most favourable opportunities for detecting what was wrong, and for encouraging what was right,—for comparing the products of various makers, and observing those several points of difference which commended themselves to the judgment, or received condemnation, according to their utility, or to the taste or experience of those whose duty it was to praise or to condemn. These shows conveyed enlarged ideas of the actual condition of the art, for the furtherance of which they were designed.

Though, in 1835, most of the standard agricultural implements had been invented, and were manufactured to a considerable extent, the first exhibition of the kind took place at Oxford, in 1839, when not more than five or six makers submitted their productions to public criticism. These makers, however, were then men of well-known enterprise, and had established for themselves reputations beyond the limits of their immediate localities. Such, however, has been the rapid march of events, that it is now no uncommon thing to witness the implements of as many as a hundred and fifty different makers on the annual arena! This extraordinary activity is to be accounted for on various grounds. While, on the one hand, men take

alarm, lest the lucky invention of another should ruin their own trade, others entertain the most sanguine expectations as to the substantial gains and honourable fame which may accrue to them from one successful device. The activity of the manufacturers, from these and other stimulants, emanating from the Prize System, has been urged to a sort of race, of a steeple-chase character! Increasing in intensity as the obstacles of opposition presented themselves, the excitement has grown by what it fed upon, until, at last, so many and such various improvements and alterations in implements, together with numerous refinements of questionable value, have been produced, that it has become a serious question amongst practical men, whether a little breath ought not to be drawn, before proceeding further in the recent headlong course.

To a full consideration of this question, the next chapter will be devoted.

CHAPTER III.

THE DISADVANTAGES OF THE PRIZE SYSTEM, AS NOW PRACTISED BY AGRICULTURAL SOCIETIES.

It has been too often insisted upon, by philosophers as well as by moralists, to make much elucidation of the position necessary here, that every virtue has its kindred vice, and that, between the termination of one and the commencement of the other, the line of partition is extremely fine. The stimulants of the Prize System, like all other kind of stimulants, may be taken to excess, and so create positive injury, where the original intention was only to benefit:

“ Hourly allurements on the passions press,
Safe in themselves, but dangerous in the excess.”

It is notorious that it has encouraged, at times, an almost unbounded degree of competition, and prevented that kind of *stability*, which is as essential, when real excellence is attained, as freedom of examination is before the removal of error. A favourable report of the success of one invention operated as a sort of “hue and cry,” amongst agricultural implement makers, followed by a sharp attack of the inventive powers, and inoculated many a mechanical genius with the idea, that it was incumbent on him, thenceforward, to have, at least, one (so called) “improved” implement, at every exhibition of any mark or likelihood.

One result of this “prize-competition run mad” has

been, that multiplied proofs of an ornamental, rather than a useful, proficiency continually met the eye of the judges at the annual exhibitions, until the Royal Agricultural Society became so deluged with *alterations*, miscalled "improvements," and so sensible of the evils of novelty of design and precipitancy of execution, that, in the exercise of a sound judgment and a strong will, it at once reduced the amount of its annual prizes two-thirds, by this means seeking to curb the competition it had evoked. The society aroused itself to the fact, that all good things may be abused, and that its former profuse offer of prizes had become most injurious to the cause it desired to serve, by frittering away upon unfruitful novelties the means that ought to be applied to productive utility; thus sinking in the abyss of nothingness that energy of thought and that action of labour which are the most valuable of all the various kinds of capital. The smallest item expended for a purpose, beyond that required to reach the point of positive utility, is so much labour abstracted from efforts to promote the benefits it is calculated to confer. There is a simplicity in this fact which every one can understand and appreciate for himself, and which must commend itself even to those most wedded to the Prize System.

It is well known that this system had, originally, a double end in view: it had to reward ingenuity, and, at the same time, serve a useful purpose, by facilitating the cultivation of the soil. The manufacturers, perfectly aware of this, shaped all their inventions to serve this end. They had no chance of obtaining custom otherwise. The demand had to be created amongst the farmers, without which neither this nor any other pursuit, connected with agriculture, could be successfully or profitably carried on. Making themselves thoroughly acquainted with the necessities of the farmers, the manufacturers, with their accustomed penetration and zeal, did their best to supply them. The industrial progress of the farmers, indeed, is mainly

due, not so much, perhaps, to inventive genius as to a quick perception of the *practical* uses to which an invention might be applied. No men understood this better than the manufacturers of agricultural implements; and they, consequently, exhibited a watchful readiness to seize every means of economising cost, time, and labour, which were the ends sought by the agriculturists, by producing instruments of the most serviceable and durable kind.

But now, and for some time past, “a change has come o’er the spirit of their dream.” They have been compelled, as it were, partly to turn from their original course, —necessitated, in fact, by the working of the Prize System, to purchase applause from one party, at the sacrifice of the utility due to another. This is to be lamented, no less for their own sakes than for the sake of their best customers; for of what real good is it to augment the toil of the inventor, to torment the mechanical powers of the manufacturers, leading them to overlay what is sound by the fantastical, and substituting for the useful the empirical design of “something new,” if this main object is not advanced? Every such design is a sort of Juno, dazzling the eye with novel beauty, but fading to a cloud directly Utility would embrace it! It must be obvious that money so spent is worse than wasted: it does harm, instead of good.

Nor has all been said, when this has been said. Descending from merely general remarks to an examination of particulars, let this point be submitted to the touchstone of truth. All machinery has its broad and ready points, and some of it is not at all difficult to test; but it is a well-known fact amongst those most likely to read these pages, that many a “prize machine” has been as *costly* to its projector as, comparatively speaking, it was worthless to those for whose use it was expressly designed. This observation must be understood as excluding from its reference

all those simpler kinds of instruments which can easily be distinguished from the more complicated specimens of the art. It has fallen within my own knowledge, that, when a farmer desires to purchase one of these complicated and showy prize machines, to which allusion is here made, for the purpose of testing its asserted rare qualities, he is dissuaded from his purpose by the very maker of it himself, who knows that its highly-wrought parts were made to win the prize, and not intended to stand the rough wear and tear of ordinary farm-work.

Implements of novel construction, that act well in one season and on a particular soil, may be found defective in another, owing to differences in the crops and soils to be operated upon. This further shows the fallacy of the Prize System, by urging forward assumed *improved* implements, before sufficient time be allowed to apply the proper tests.

This error is well commented on by the Judges appointed at the Gloucester meeting, in 1853, in the following extract from their Report on the Trial of Steam Engines :

“As we have before stated, in making the foregoing awards, we felt that *the objects of the Society were not secured* ; viz., to obtain engines composed of the least possible number of working parts, sufficient to produce the best practical results as to power and economy, both in consumption of fuel and repairs.

“As such engines are intended to be placed in the hands of those who hitherto have had little or no experience, either in their management or repairs, it must be of the utmost importance that they should require as little attention as possible. We find that manufacturers have given their whole attention to one point only, viz., *a low consumption of fuel, which has evidently been encouraged by the principle upon which the tests have been applied and the prizes awarded.* This has introduced great complication of parts, and *entirely set aside the main objects required* ; that is, simplicity and utility. This is freely admitted

by the manufacturers themselves, and, in some cases, *two classes of engines were exhibited; viz., the racer to compete for the Society's prize, and the working or commercial engine.*

"We, therefore, beg strongly to recommend, for the consideration of the Council, that, in future exhibitions, the superiority of one engine over another should be considered with regard to their simplicity of arrangement, each part being well proportioned and easy of access and repair, combined with steady and economical working and weight, and, of course, price.

"Should this be carried out, we have no hesitation in believing that very great benefit will be secured to the agriculturist.

"WM. OWEN,

"JNO. V. GOOCH,

"Judges of Implements, appointed by the Council."

Mr. W. F. Hobbs, in his "Report on the Exhibition and Trial of Implements at the Carlisle Meeting, 1855," thus alludes to the same subject:

"The conditions of competition laid down by the Society, for portable steam engines, have, unfortunately, led to the production of engines only intended for winning the Society's prizes, and known as 'racing' engines, requiring the nicest care, instead of those simple and effective engines which may be safely entrusted to the management of intelligent farm servants."

These are very significant extracts, and the reader is entreated to bear them well in mind.

That exquisite perfection of the various parts of a machine is not always consistent with its proficiency, when applied to the rough work of tillage, is a fact well known to practical men. A farmer, to wit, if he wanted a plough, would not think of buying one with the share of the polish and edge of a razor. When all principles for constructing a certain machine are settled, the comparative superiority of different makers depends upon a variety of details of

execution, and especially on degrees of durability, and capability of executing work, without repair; and these qualities could never be accurately judged by trial in a single competitive race. If, therefore, a farmer is "taken" with an implement made for show, and is determined, at all risks, to try its metal, as is sometimes the case, he must not be surprised to find it as unsubstantial and delusive as those fruits of Eastern fable, which were so attractive to the eye, but which turned into ashes on the palate. The consciousness of the unfitness of the thing for its purpose, thus brought home to conviction, soon destroys the pleasure derived from its beauty. "To do good work in the field," says J. E. Denison, Esq., "you must have strong and well-constructed implements. The value of solidity and strength is fully recognized in the implements akin to the ploughs, drags, scarifiers, and broadshares, by which so much of the labour on the best-cultivated farms is now effected."* When prize machines do not answer this description, the inventor may run away with the laurel, but who reaps the advantage? Nay, may not a mishap of this kind be productive of a positive disadvantage? If a doubting farmer were tempted to try an instrument of the kind alluded to, by way of experiment, how would he be likely to bear his disappointment? Would it not confirm his previous suspicion, and possibly deter him from ever trying any similar machine again? Besides this, not only would the prejudiced farmer have his prejudices strengthened, but the whole district in which he resided would have their faith shaken by this failure of a prize machine. If a single implement successfully at work in the field has more effect, in its general introduction, in a rural district, than volumes of essays, or the most costly of prize medals, what a drawback and a disadvantage to the Prize System it is, to have a direct censure passed on the judges who awarded a prize

* *Journal of the Royal Agricultural Society*, Vol. XVII., p. 41.

for the production of an implement which would not stand the test of continued use !

Against such kind of mishaps, no human prudence, it may be said, could have provided ; but, if simplicity in construction, and practical utility in application, combined with fitting materials, were the objects sought to be attained, the risks of failure and accident would be very much diminished. As the triumph of mechanical skill consists in compelling the reluctant earth to yield to instructed industry, what it naturally refuses to produce, without it, all instruments exhibited for prizes ought to be made with this *sole* object in view. Why, then, continue to stimulate production of an opposite character ? Why encourage these inordinate longings after something too visionary to be tangible, too elaborate to be practical ? Why not take warning by the well-known aphorism, that “ Nothing planted can flourish, while you are perpetually disturbing the earth around its roots ? ”

But here I may be met, as, doubtless, I shall be met, with a counter question or two ; such as, Who is to limit the inventive powers of man ? If absolute perfection is unattainable, why should further approach to it be checked ? In the struggle for improvement, who can tell what future victories are in store ? Why, then, interfere with the combatants ?

There is, in this free and enlightened country, an almost insurmountable repugnance to the least supposed check being given to the march of invention in any art or science. The general tendency of Englishmen is not to rally round a positive standard of excellence, but to encourage any and every kind of competition, lest, in shutting out the bad, the birth of the good should be prevented. The full anticipation of what the future is to effect is rarely realized. The general faith in science, as a worker of wonders, is

almost unlimited, and, whatever the improvement, a further practical application of it is expected. The scientific discoveries of modern times have effected so vast a revolution in all that relates to the comfort and conveniences of man, that it is difficult to form an idea of all that may be expected from them,—what their future aims, and where their final resting places. And truly, when it is considered what *has* been effected, it is not very surprising that, after an invention has proved its worth in one particular, credit should be given to it for possessing a hundred other qualities yet to be discovered :

“ No wild enthusiast ever yet could rest,
Till half mankind were, like himself, possess'd !”

The expectation shadowed forth in this remark is extravagant,—too much so, indeed ; for, although popular excitement is a necessary condition to the success of some undertakings, it defeats its own purpose, when carried to excess. It would be well, therefore, if the public were to moderate its expectations in these respects, and descend from the stilts of imagination to the ground of moderation and reason. There is a fallacy in the presumption, that whatever is last discovered is best, and that whatever retards an onward progress is a baleful hindrance. It is forgotten that we may “rush on” even unto perdition, and that “progress” may be made in the “Road to Ruin,” as well as in the road to reform ! This is written without any desire, as there is no occasion, to check that active spirit of enterprise by which many useful men are guided. If I am misunderstood here, it shall not be my fault. I yield to no one in a desire to see improvements of all kinds spread their blessings far and wide. But, while agreeing so far with agricultural reformers, it seems to me that the advocates of the existing Prize System are looking in the wrong quarter for what they seek. The essential requirements of progress do not embrace the delirium of compe-

tition, which that system engenders. There is a vast difference between advocating a healthy system of encouragement to genius, and that fatal kind which creates a morbid spirit of action, an unnatural stimulus, the atmosphere of which destroys so much thought, and intoxicates the rest. These are the results to be avoided. Those who have studied the question know, that competition, under the restraining influence of discretion, is guided into the practical medium, which, instead of chaining up the spirit of improvement, gives light to its path, and guides its footsteps in safety. Without the common mode of offering prizes, the workshops of our agricultural implement makers afford ample scope still for zealous and prolonged exertion, and a promise of reward sufficient to stimulate the labours of the improver, for many years to come.

None have more reason to complain of the Prize System than the manufacturers themselves. It positively keeps them in a constant fret. They are obliged, very frequently, to pander to a restless desire for something new, to make alterations in their instruments, from the necessities which that desire brings in its train, rather than from the perception of any artistic advantages guiding genius. The impetus of mind as well as of matter is weakened by every deflecting force. Hence our mental powers operate with their utmost strength, when acting in their natural direction. Caprice and perverseness will, sometimes, obtain for their possessor a brief admiration, as there will always be men interested in applauding the obliquities of genius, and who are happy to be countenanced by such high authority as the Royal Agricultural Society of England. A manufacturer, having gained prizes for a particular quality of tool or machine, finds it absolutely necessary to try again and again, and set up "something new," at all hazards,

" Wearing out life in his artistic whim,
Till his artistic whimsy wears out him !"

Many a one has deprived himself, if he is not now depriving himself, of the repose and independence of thought, amidst which he might become aware of his own particular tendencies, and nourish his weaker powers into an equality with the stronger, instead of frittering away his mechanical genius into fragments, led on by the *ignis fatuus* of the Prize System. Others, again, unable to obtain distinction in the legitimate path of improvement, strike out fantastical changes in this or that implement, without at all adding to its effective qualities; but, the new folly being warmed into life in the hot-bed of the Prize System, their delight and vanity know no bounds, and, like the conceited schoolboy, they exclaim, “You think my last copy capital, do you? Ah! but that’s not my best!” Thus the whole thing swells into pure extravagance, and

“Thus men go wrong, with an ingenious skill,
Bend the straight rule to their own crooked will;
And, with a clear and shining lamp supplied,
First put it out, then take it for a guide.”

This is not only a great evil in itself, but the source of many other evils. The old standard of the greatest simplicity, with the greatest utility, is necessarily overlooked. What wonder, then, that some of the new points are pointless?—that want of steadiness in conception, and clearness of design, should be attended by defective utility?

It would be well, perhaps, to let the manufacturers speak for themselves, on this subject; and I gladly avail myself of this opportunity of publishing their Memorial to the Royal Agricultural Society, last year. It is as follows:

“We, the undersigned Engineers and Manufacturers of Agricultural Implements, and Exhibitors at the annual meetings of

your Society, desire to submit to your consideration our views on the question of the present system of offering individual money-prizes for competition amongst the makers.

“ We object to this system, on the ground that it operates as an undue stimulus to competition, tending less to the production of useful and practical machines than to the development of ingenious peculiarities, by which, with the aid of highly-skilled manipulation, the prizes may be won ; but more especially is our objection taken on the ground of the unfairness of its operation. This is evidenced in the effect it has of marking, in a manner altogether disproportionate to the circumstances, the *appreciation* of ONE to the *depreciation* of ALL OTHER competitors ; although, as very frequently occurs, the merits of several may fairly be considered to be equal.

“ We are desirous to express our entire satisfaction with the resolution of the Council, at its meeting, in December, for dividing the trials of Implements into three sections, so as that each section may be tested triennially. This will greatly relieve the labours of exhibitors, and, at the same time, afford opportunity for more deliberate judgment.

“ We have no wish to lessen the severity of the tests by the instruments of your engineer, or by the close observations of competent judges ; but we are desirous that the reports of the judges, in such form as may express their approval (either entire or qualified, as the case may be) should be placed in the hands of exhibitors, before the general Exhibition-day, in substitution of the individual money-prizes, as heretofore offered on the Society’s prize-sheets.

“ In our desire for the abolition of general prizes, it is not our wish to prevent or discourage occasional offers of special prizes, of high reward for such implements as may appear to require the peculiar application of mechanical intelligence, to render ideas, not fully developed, practical for general usefulness. Nor do we wish the Society to be limited, in the distribution of its smaller medals, in such cases as it may appear desirable to mark approval of new inventions, as has heretofore been the practice.

“ We beg respectfully to press these views on the consideration of the Council, feeling confident that, if carried out, the active co-operation of the Implement makers, as a class, will be

most effectually secured, and the objects of the Society more practically obtained."

This Memorial was signed by more than nine-tenths of the usual exhibitors of implements, at the Society's annual shows, representing nineteen-twentieths of the value of the implements so exhibited.

The experience of such practical men as dictated the Memorial, when we find it formally arrayed against a system of this kind, is a beacon to warn us what to shun; and the names of such men, thrown into the scale of authority, are decisive in favor of the suggested improvement.

The fundamental errors of the Prize System are clearly set forth by the Memorialists. "The ingenious peculiarities" created by the fever-heat of competition, are *novelties*, no doubt, but they are so often without any discoverable *practical* purpose, that many choose the old standards of simplicity, with economy,—neatness with utility.

" And heed not whether things be old or new,
But blame the false, and value still the true."

What, in fact, is *the object* of applying science to the business of the farm? Is it not UTILITY? What is the first purpose of an agricultural implement-maker,—the first consideration, at least, under which he works? *Utility*. This fact is undeniable. Whatever other aims he may accomplish, unless he produce a really *useful* machine, he has failed. To disregard utility, in judging of any implement for the land, is as if a man were to point out the mechanism of a watch without any reference to its powers of indicating and keeping correct time. He may call upon people to admire the ingenuity and com-

plexity of its workmanship, its wheel within wheel, the beauty of its enamelled face, or its engine-turned cases ; but, after all, what is the first question asked by its purchaser ? Is it not, simply, “ Does it keep time well ? ” If the watch is found deficient in this respect, whatever other qualities it may possess, it is rejected as next to worthless. So it is with a machine. It may be neat in design, faultless in execution, but it is a bad machine, nevertheless, if it cannot be made to perform its work efficiently. Utility is the only measure of its value. If that fail, all fails. Vainly may judges agree on the small amount of fuel a steam-engine consumes in a given time, its speed and correctness of execution, for a short period, according to the rules of art, if, on trial, the farmer finds it breaks down, after a time, when it is applied to the ordinary work of the farm ! Judges may lay down rules, and decide according to them ; but a farmer cannot be brought to believe, that any engine is worth his money, unless it will do his work !

There is often a want of steadiness in what are termed “ highly-skilled manipulations,” a want of clearness as to what is to be developed, that is very prejudicial, at all times. In studying to produce “ something new,” it is forgotten that novelty is only good when it takes a useful shape. Trusting to mere novelty is sheer idleness, or weakness, if not something worse. Men who pander to this taste are alive to the fact, that some people make so much fuss about originality, as to accept anything with that pretension, in preference to the old style, however intrinsically superior it may be. A large number of errors, indeed, rise out of man’s determination to have something new. There is a halo floating over it which dazzles the popular eye, and bewilders the spirit of appreciative fairness. The new thing is taken up superficially, affectedly, idly, or with the purpose of being put forth in the way of trade or the way of notoriety, which charac-

terizes too much the speculations of the time. The Prize System gives it peculiar temptation to display itself, leading it to frivolize all it touches ; for utility can scarcely be preserved where novelty and “ingenious peculiarities” are to be constantly dovetailed together. The reputations obtained by this kind of combination are often attended by some *expense*, as well as gain. Tact is required to avoid the sale of implements which are only made “for show ;” but if this cannot be prevented, the fancy article may have to be replaced by one of a more durable character, at the cost of its maker, to appease the disappointment of an angry customer. Ambition, if it usurp the rights of utility, must look for all the punishment that indignant utility can inflict ! If such cases are rare, they, at least, serve to expose some of the inconveniences and drawbacks with which the Prize System is chargeable.

But there is another serious result of this system, different in its nature, but also greatly to be deprecated, and that is the enormous expense which it brings on competitors, without an equivalent return. Each succeeding step in the race becomes more costly than its predecessor. The manufacturer, with an adequate capital, is urged forward, at headlong speed, and at great expense, to prevent being overtaken and beaten by others. A large outlay is thus often absolutely necessary to give competitors a chance of success. It is too expensive a pursuit, to be largely followed by any but the wealthiest of the manufacturers. This, therefore, operates as a serious evil to the smaller of the class, many of whom are as effectually shut out from attempting to achieve distinction of this kind as if they dwelt in the moon. It is too often the expenditure of money, rather than the employment of real skill, that now wins the prize.

This fact elicits another great disadvantage of the Prize System, to the *farmer* especially. None, indeed, are more

interested in the success of the present undertaking than the farmers. The lavish expense incurred by makers,—£500 to £1,000 having been spent by a single firm for one implement-show,—must be repaid to them from some source. They can only remunerate themselves for their outlay by adding to the price of their implements; and what, therefore, that source is, there can be no difficulty in guessing aright. But, besides this, the farmer is the sufferer in another way; and we would particularly draw his serious attention to this fact. The fluctuating character of the hot-bed productions of the Prize System prevents implement-makers from confining their attention to any one or more of their productions, so as, by manufacturing a large number of them, to greatly reduce their present cost. It would not be prudent, under present circumstances, to manufacture more of any kind of implement than is likely to meet the immediate demand, lest some trifling and useless alteration should be “invented” in it, and have the effect of leaving the whole stock on the manufacturer’s hands. In alluding to “trifling and useless alterations,” I am only stating a positive truth. It is within my own knowledge, that, notwithstanding all the prizes that have been awarded for “alterations” and “refinements” in some implements, during a period of nearly ten years, these very implements are, at this moment, substantially the same as they were, when

“In the farm, they bore a useful part,
Quite unindebted to the tricks of art.”

None of the “refinements” were found to be of any real use. They did not assist in the fuller development of the usefulness of such instruments, and have, therefore, been rejected as superfluous and inartistic.

All this affords subject for the gravest reflection; and it is to be hoped that it will receive the especial consideration

of all those who are more immediately interested in the question. It must appear how economically important it is to the farmer, that the cost of his implements should not be artificially raised by the means just indicated. The best safeguard of the farmer's pocket, indeed, is a thorough knowledge of the evils of the system which is here exposed. It is to his interest, more than to the interest of any one else, perhaps, to value science, as applied to general husbandry, and to expend his money only on implements calculated to carry out that science beneficially. The manufacturer will find it to his interest to assist the farmer in this, if the farmer will but let him. Their real interests, in fact, are identical; and whatever benefits or injures either of these parties will, in the long run, benefit or injure the other. The Prize System has been allowed to grow into an abuse, than which nothing can be more injurious to all concerned in it; for, while the system, which bears testimony to some principle, is capable of being turned to good account, the abuse, which is the result of over-stimulus, becomes the antagonist of real improvement. It is abundantly plain, that to go on in the old track is most impolitic; and it is equally plain that the manufacturers are tired of following its caprices, and that the farmers now receive little or no benefit from it. It is, therefore, clear to demonstration that farmers and manufacturers have it in their power, by a combined effort, to introduce a new and better system, and, ultimately, to influence all the agricultural societies to abandon the old one.

Having thus exposed the actual evil, I purpose, in the ensuing chapter, to offer a few practical suggestions for its possible remedy.

CHAPTER IV.

SUGGESTIONS FOR A PLAN TO ENCOURAGE THE IMPROVEMENT OF AGRICULTURAL IMPLEMENTS.

HAVING endeavoured, in the preceding pages, to point out some of the more striking and characteristic objections to the existing Prize System, it is now my duty to offer a few suggestions for a plan to take its place.

It may not be possible so to shape these suggestions as to meet the views, and elicit the approval, of every one interested in the matter. Conflicting opinions and adverse theories are abroad on this, as well as on almost every other subject, that now agitates the world. It is well that it is so; for by different opinions formed on the same subject, under different circumstances, coming into collision, the light of truth is struck. Neither flint nor steel could, separately, be made to elicit sparks; but bring them into rough contact with each other, and the desired object is gained.

It shall not, however, be said of the writer of this, as it has been said of others, "Do something, and they will find fault; say something, and they will have an answer; but they will neither say nor do anything for themselves." Now, what I would say, and what I would do, is just this:

All the implements sent for exhibition to any of the

periodical shows of the Royal Agricultural Society, might, as now, be divided into sections. An annual trial of each section should be given, and ample time devoted to it. The mode of trial to be in accordance, as nearly as circumstances would admit, with agricultural practice.

Previous to the trials, a competent Board of Examiners, composed of agriculturists and agricultural implement-makers, with the consulting engineers of the society, should agree upon the points of excellence to be noted. Thus, for instance, a thrashing machine might be tested in,

- 1.—Quality of materials.
- 2.—Quality of workmanship.
- 3.—Thrashing done clean, and without injury to the corn.
- 4.—The separation of the loose grain from the straw.
- 5.—Straw not injured.
- 6.—Chaff blown out, without a mixture of corn.
- 7.—Short straw, leaf, and cavings separated.
- 8.—Barley avelled.
- 9.—Quality of sample.
- 10.—Weighed into sacks.
- 11.—Quantity of clean corn.
- 12.—Time of execution.
- 13.—Amount of driving power.
- 14.—Selling price.

With these points arranged beforehand, the tasks of the jurors would be rendered definite and systematic, and, therefore, less difficult than by the present mode; while, at the same time, their reports would prove more advantageous to both the sellers and buyers of such implements, if published immediately after the awards. Such

reports should include the opinion, fully set forth, of the agricultural jurors on the merits and defects of the implements, in a practical and economical point of view, and the opinion of the engineers on the mechanical advantages and disadvantages of everything that related to the design and workmanship.

“In every work, regard the workman’s end,
Since none can compass more than they intend;
And if the plan be good, the parts be true,
Applause, in spite of other faults, is due.”

To be effective, great care should be taken to frame these reports in a judicial, not in a competitive spirit, so that they might not only be a safe guide as to what to purchase, but what to reject, and so effectually discourage the production of mere prize toys.

To give due effect to this plan, and general assent to the principles of it, *no money-prize should be offered*. The trade value of a real improvement far outweighs any amount likely to be given in immediate cash, or, indeed, any honour that can be conferred by mere prizes. The farmers will be sure to reward amply, by their purchases, the meritorious producer of any approved implement. All kinds of merit, as well as all grades of exhibitors, whether rich or poor, high or low, would thus stand on equal ground, and be judged alone by their deserts, agreeably to the dictates of that impartiality and honesty which should be scrupulously observed in all cases of this nature.

One great recommendation of this plan is, that it would protect competitors from the abuses incidental to the existing system of rewards, which exalts the few gainers of prizes, to the detriment and discouragement of a host of others. As only one or two can gain a prize for a par-

ticular implement, it often happens that a score of other exhibitors pass unhonoured, though the merit of many may be but little inferior to the first and second successful candidates. Such results must arise from an entire misconception of the end to be accomplished. If, for instance, the several varieties of excellence in their instruments had been pointed out, and published in the way here advocated, all would then have come in for a due share of reward. Encouragement would also have been given to their further efforts, and, by studying to avoid the faults indicated, ultimate superiority might have been attained, and so the very design of the Prize System effectually carried out.

It may be urged against this plan, that the *practical* direction of performances is often more difficult than the *theoretical* conception. The latter meets with no substantial difficulties, while the former may encounter obstacles destructive of its efficiency. No doubt, theory and practice do not always harmonize; but no fear need be entertained that any such result will take place here. No great experience is required to mould the suggestions to the shape that would suit any given exhibition of agricultural implements. Little more is wanted than a wise selection of jurors, fitted for the particular departments to be assigned to them,—men of sufficiently large experience and judgment to make them able appreciators of merit, and keen detectors of mere pretence. It can hardly be doubted, that, in times like these, there are very many to be found in this country who have undergone the discipline requisite for such offices, and who would be ready to take their parts in a scheme which would add to the trophies of genius, and unseal a well of delight for all who rejoice in the march of real improvement.

These “ Suggestions for a Plan to encourage the Improvement of Agricultural Implements ” may be explained

very imperfectly ; but no one will rejoice more than the writer, if the subject be taken up and improved by practical men, and carried out to its legitimate results. It would then accomplish the whole object of agricultural exhibitions. Competent judges in each department of the mechanical arts of cultivating the land, with ample and undistracted trials, would report, on fixed principles, as to the merits or demerits of this or that class of machines or implements, every year ; and, at one and the same time, the agricultural visitors would have the most favourable opportunity of examining everything in which they felt an interest, and observe it, too, in active operation. Such as were unable to visit the show, or witness these trials, would have this satisfaction under their disappointment : they would have authoritative, scientific, and practical reports, to guide them in the choice of their purchases.

There would, also, be another advantage attending the suggested plan, which should not be overlooked. The annual shows would be larger gainers in the extended interest they would excite ; while the societies, under whose patronage they would take place, would gain in respect, in proportion as their authority and influence were properly or improperly exercised. Under the new order of things, their duties would be more important than they are now, or ever have been ; and on their efforts to procure correct and useful decisions would depend the benefits they conferred.

This allusion to provincial societies is made on the uncertainty as to whether they will adopt the advice, given in a previous chapter, to unite with the Royal Agricultural Society of England. Such union would, I conceive, be a judicious step, and it would certainly give this suggested plan a better chance of success than it would have under present circumstances. Nothing less

than the revenues and powers of one grand national institution could furnish the necessary machinery for carrying out that plan to the perfection of which it is capable. Trial grounds should be provided ; a permanent officer, accustomed to deal with machinery, should be employed to settle all the internal arrangements of the implement-yard, and the external arrangements for the trial of machines, and provide a written plan for the guidance of the stewards, jurors, and exhibitors ; the most competent judges in every department should be engaged ; and every proper means be provided, regardless of reasonable expense, so that the great objects in view could be carried out promptly, efficiently, impartially, and beneficially. Provincial societies have neither the time, the means, nor the opportunities, of bringing all these appliances to bear on a given point, with such irresistible force and effect as one united, energetic, influential, and wealthy body would have.

But even supposing, for the sake of argument, that local societies had all the means and appliances necessary for carrying out the great improvement in question, there is another class of men entitled to a voice in the matter. All inventors seek the means of exciting public attention, and of acquiring public approbation ; and no opportunities are so available for these purposes as those offered by the annual shows of the Royal Agricultural Society. The enormous outlay of both time and money expended by the exhibitors, in preparing and conveying their implements to these shows, would make them hesitate before doing the same thing too often. What they would be willing to do, on the occasions alluded to, they might object to repeat, at the invitation of any of the local societies. Having received the award of the first agricultural tribunal in the world, they could hardly be expected to appeal to any decisions of a second or third-rate character, especially as such a course would not be likely to add to

their fame, while it would be certain to largely increase their expenses. Some might, as they do now, so appeal, and very conflicting testimony be the result. How far this would operate injuriously may be gathered from what is now taking place frequently. The better way would be, to have only one tribunal, so long as the presiding judges of it were men of the very first standing in their several departments, and thus secure a ready acquiescence in their decisions by the makers and employers of agricultural implements.

With regard to the decision of the Council of the Royal Agricultural Society on the reform here suggested, there is some hope. This hope is grounded on the movement made by them in the right direction, when they were induced, on the representation of a very large proportion of the implement-manufacturers, to apportion the Society's prizes and trial in the implement-department over three years, instead of including them all in each successive year. The result, so far, has been all that could be expected. The only show that has taken place under the new arrangement, at Chelmsford, is acknowledged, by competent judges, to have been by far the most interesting and instructive to the *farmer*; and it is to be hoped that this fact will have its due weight. If prizes for this or that kind of instrument were entirely abolished, it would remove the principal impediment that now obstructs makers from exhibiting a larger number of implements at work, each maker in his own particular way.

The Council of the Royal Agricultural Society of England, however able and powerful, will hardly claim exemption from the most universal law of our nature,—that of the necessity of modifying theoretical views to actual circumstances. Both ability and power should be directed, not so much to the mastering and upholding of theories,

as to the application of them judiciously, and suiting them to existing requirements. The Council have already admitted, by their own acts, that the *past* plea for their Prize System is no longer applicable to the *present*. With power to perform a wise act, there can be no valid excuse for neglect of duty, except unfitness for duty. With full authority comes direct responsibility. It may be confidently anticipated, therefore, that this argument will present itself to the minds of such practical and intelligent men as form that Council, and carry due weight with it, at the same time.

No disposition could be more hurtful in a society, of which they are the directors, than halting on the road of reform. It defeats public expectation, by partly neutralizing that portion of good which has already been effected. This remark is not intended to censure piecemeal reform. Bit-by-bit reformation is not so objectionable, provided all the bits go on together. The Society still recognizes, as part of its arrangements for carrying on its scheme of agricultural improvement, the existence of a system which has become an unmitigated evil, not only to the purchasers of agricultural implements, but to the makers of them also. In this view of the matter, the Society has no other reasonable course to pursue than to act at once upon the advice of Hamlet, and "reform it altogether!" Let the complex system of money-prizes be totally abolished, and the agricultural implement-makers, like the manufacturers of any other kind of implement, be relieved of such artificial arrangements, and left entirely free to follow the natural course of trade, by fair and unshackled competition with each other. Mechanical science would, it is believed by sound judges on the subject, be then brought to bear more efficiently than now on all the processes of husbandry.

The question of this reform should occupy the Society's

first attention, and stimulate its immediate exertions. If any class of men is entitled to receive attention from the Council of the Royal Agricultural Society of England, it is surely that class which is directly interested in all that relates to the cultivation of the land. That farmers, as well as agricultural implement-makers, are injured by the Prize System must be evident to all who will take a large and comprehensive view of its results, and it is equally plain, that the benefit of the many should outweigh the temporary profit that a few may derive from its continuance. As to those who are always opposed to what they term "speculative changes," and manifest an obstinate resistance to change, even when change would be an admitted improvement, they are sure, sooner or later, to be hustled out of their place. There is nothing to fear from their opposition. If it be the duty of the Council, as it is liable to be every man's duty, upon occasion, to oppose the sentiments of a class of their countrymen, let them endeavour to secure the assistance of a still larger and more enlightened class to help them in the good work. It is always well for a society when its leaders take the right step at the right time,—when an experiment in their management is abandoned as soon as its evils are detected, and its results shown to be inimical to the prosperity of those for whose prosperity it was originally designed. It is quite certain, that, if the Council take the step here advocated, though they may possibly create a few enemies, they are sure of rallying around them numerous warm and energetic friends.

It is not intended to assert, nor is it at all necessary to justify this publication that it should be asserted, that the benefits to be derived from the "Suggestions for a Plan to encourage the Improvement of Agricultural Implements" will be without disadvantages. It is not possible, perhaps, to achieve any thing so perfect as to be without

alloy. But it may be allowable to observe, that there is much in the plan suggested to excite hope, while there is certainly nothing in it to make it unreasonable to try,—fully, fairly, and patiently,—whether it be not possible to work it out, so as to bring about results beneficial and satisfactory to all interested in the trial.

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[See next page.]

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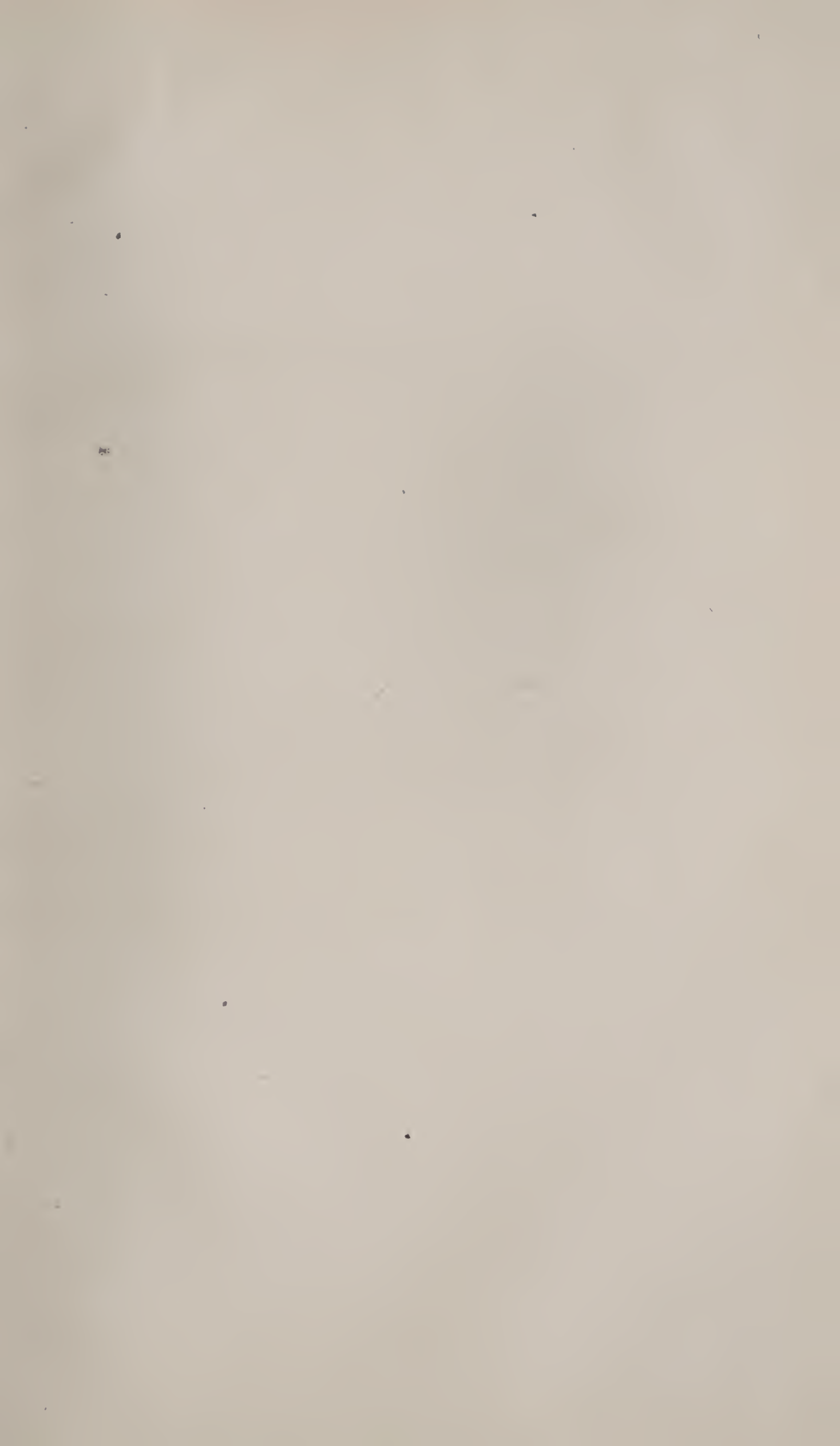
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